

I continue to report on both new confirmed and new probable cases as reported by the DPH and as they appear in MAVEN, respectively. Reporting on both of those numbers allows the best longitudinal comparison with past data and also most accurately reflects the incidence of new cases and thus the workloads of our town Public Health Nurses who carry out the contact tracing work.

Daily new case number in Barnstable County continue at their post-autumn elevated levels. Our **7-day average cases per 100,000 population per day** continues to rise and is 34/100K, with 7-day **average cases per day** of 72. Yesterday afternoon the DPH reported **92** new confirmed cases for Barnstable County.

Barnstable County's 3-day (12/9-12/11) new case tally peaked at 267 cases last week. The second-highest 3-day tally was this week at 242 cases (12/15-12/17).

Nantucket's 7-day average cases per 100,000 population remains very high at 180/100K (avg. 21 new cases per day) but is down from its high of 202/100K (avg. 23 new cases per day) ten days ago. However, yesterday afternoon the DPH reported **16** new cases for Nantucket.

Martha's Vineyard's 7-day new case rate per 100,000 has decreased slightly this week, recorded yesterday at 54/100K (avg. 9 cases per day) which is up from 41/100K (avg. 7 cases/day) last week. Tuesday afternoon the DPH reported **20** new confirmed cases for MV; an additional 12 cases have been reported since then.

During the 14-day period from 11/29 to 12/12/2020 Barnstable County added 893 confirmed cases, with a test positivity rate of 4.4%--slightly higher than the prior two-week period. During that same two-week period Nantucket and Martha's Vineyard jointly added 401 confirmed cases, with a test positivity rate of 8.47%--much higher than the prior two-week period. **Martha's Vineyard and Nantucket's combined percent positivity figures remain higher than the statewide positivity rate of 6.01% during the same period.**

Fatalities from COVID are increasing in Barnstable County; the total is now **212**. **Our fatalities have now climbed beyond the muted pattern of last summer and fall** (see chart below).

Hospitalizations and acuity of illness have increased very significantly since the second week of November and remain elevated. Cape Cod Hospital and Falmouth Hospital have now **suspended visitation** of inpatients except under very limited circumstances (end-of-life, etc.).

As of yesterday (3pm), the DPH's reporting shows that there were **40 COVID patients in hospital**, **7** of which were in the **ICU**. (See table below)

School districts are staying vigilant and reacting well to new cases. Several school districts (Cape and Islands) are dealing with increased confirmed and probable cases and the necessary knock-on effects of information transfer and follow-up. Several school districts on the Cape and Islands have moved to 100% remote learning.

This week our County Health Department, in partnership with Cape Cod Healthcare and the Hyannis Fire Dept, opened **additional testing locations in Barnstable County** for both symptomatic and asymptomatic persons--one in Falmouth at the Fairgrounds, and one in Hyannis at the Melody Tent. In the coming days additional testing sites on the Outer Cape will be established in partnership with Outer Cape Community Health Center at three locations. Eligibility criteria for the testing include residency in Barnstable County. Testing will be done by appointment only. Additional details can be found here: <https://www.capecodhealth.org/medical-services/infectious-disease/coronavirus/covid-19-testing-process/>

DPH-mandated **routine testing** in skilled nursing facilities/long term care settings (SNF/LTC) continues. This provides critical surveillance and allows these facilities to stay ahead of asymptomatic spread amongst staff and residents. Routine testing in SNF/LTC settings has increased to weekly for staff.

In addition, the State's **BinaxNOW rapid testing program** (already available to **schools**) has been extended to visitors of **nursing homes** and rest home residents (LTC settings) to allow visitation of residents while limiting the risk of infection from visitors. DPH has published guidance on this. The program has also been extended to **childcare centers** and further information will be forthcoming.

Among the charts below is DPH's weekly analysis of new and active **case clusters**. The table presents the number of cases by type of location, statewide. **I have sorted the DPH data to show the listing of cluster settings by greatest number of new confirmed cases.** The top 10 are listed here; the full table can be found below.

Active COVID Clusters by Exposure Setting Type, as of 12/17/20

Source: <https://www.mass.gov/info-details/covid-19-response-reporting>. Tabulation: V. Harik, Barnstable County DHS

Sorted by Number of Cases in New Cluster Settings

	Exposure Setting	New Clusters			Ongoing Clusters			Total	
		(Identified 11/15/20 – 12/12/20)			(Cluster Identified Prior to 11/15 But Not Meeting Criteria for Closing)				
		Clusters	Confirmed Cases	Close Contacts	Clusters	Confirmed Cases	Close Contacts	Clusters	Confirmed Cases
1	Household	15,740	40,339	---	6,747	3,700	---	22,487	44,039
2	Long Term Care Facilities	142	1,378	---	171	1,776	---	313	3,154
3	Child Care	130	364	504	120	81	215	250	445
4	Social Gatherings	46	262	71	49	16	22	95	278
5	Senior Living	45	257	139	46	184	36	91	441
6	24/7 Congregate Settings	36	225	52	58	59	28	94	284
7	Restaurants & Food Courts	30	182	53	54	21	110	84	203
8	Hospitals	15	175	30	24	161	28	39	336
9	K-12 Schools	31	151	130	51	23	123	82	174
10	Other Workplaces	19	86	59	24	52	7	43	138

In addition, the weekly **town risk table** for the Cape and Islands is included below, updated yesterday. This week the towns of **Yarmouth and Barnstable are joined by Brewster** in being coded Red, indicating highest risk of community spread. Harwich, red during the prior fortnight has fallen back to yellow.

Regionally case levels continue to increase, without exception. Travel restrictions among all states in the Northeast Corridor have been mutually re-imposed; Hawaii is now the only state without travel restrictions.

The **State COVID Vaccination Plan** for Phase 1 has been announced and conforms to the phases and prioritized populations identified by the CDC. In Phase 1 of the State Plan healthcare workers, older adults living in skilled nursing facilities/congregate care settings, police/fire/EMS, shelters/corrections, and other healthcare workers will be prioritized for vaccination as doses become available. We hope to see a prioritization of **childcare staff** alongside school staff in Phase 2. First shipments of vaccine will be to hospitals across the state for vaccination of their workers. The State has contracted with **CVS and Walgreens** to arrange vaccination of **older adults in SNFs/congregate care**.



PHASE ONE

In order of priority

- Clinical and non-clinical healthcare workers doing direct and COVID-facing care
- Long term care facilities, rest homes and assisted living facilities
- Police, Fire and Emergency Medical Services
- Congregate care settings (including corrections and shelters)
- Home-based healthcare workers
- Healthcare workers doing non-COVID-facing care



PHASE TWO

In order of priority

- Individuals with 2+ comorbidities (high risk for COVID-19 complications)
- Early education, K-12, transit, grocery, utility, food and agriculture, sanitation, public works and public health workers
- Adults 65+
- Individuals with one comorbidity



PHASE THREE

Vaccine available to general public

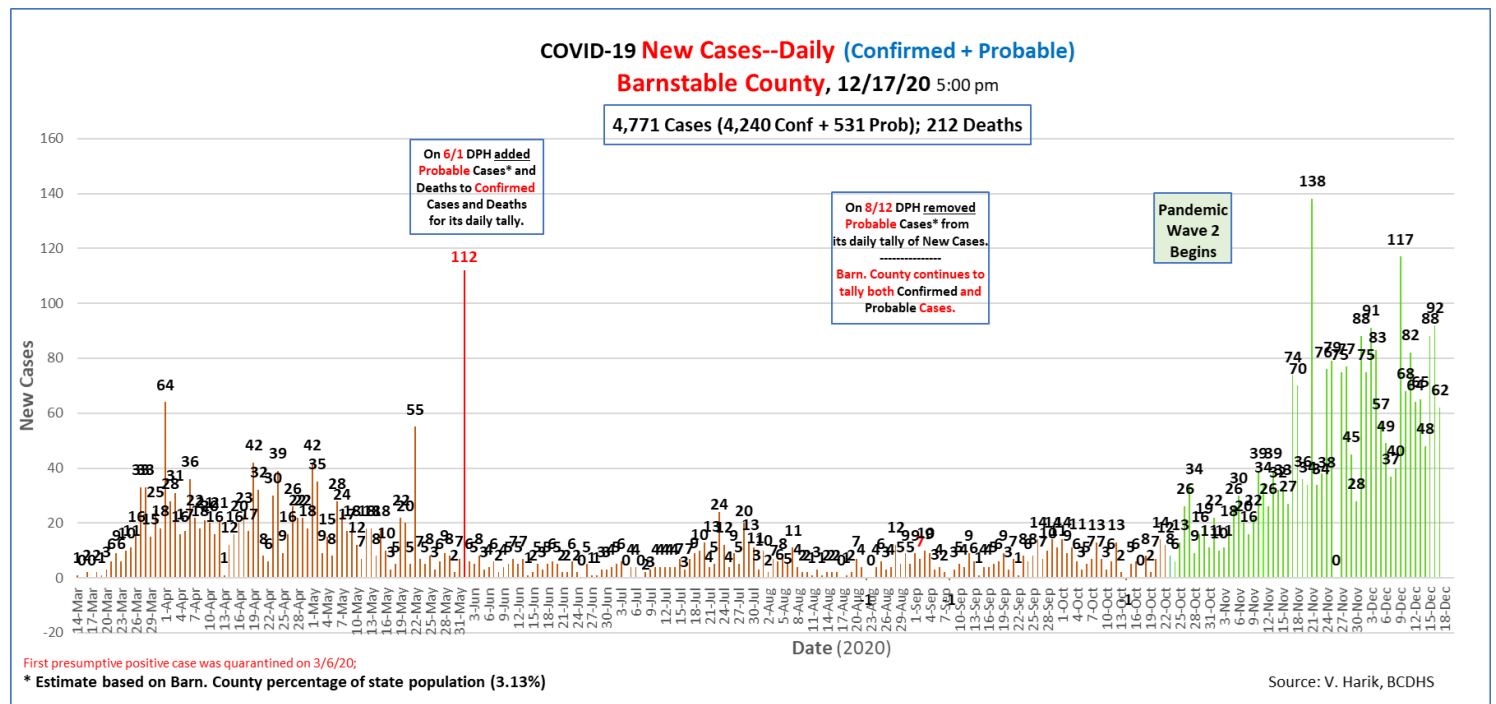
December - February

Estimated timeframes

February - April

April - June

See the charts below for additional information.

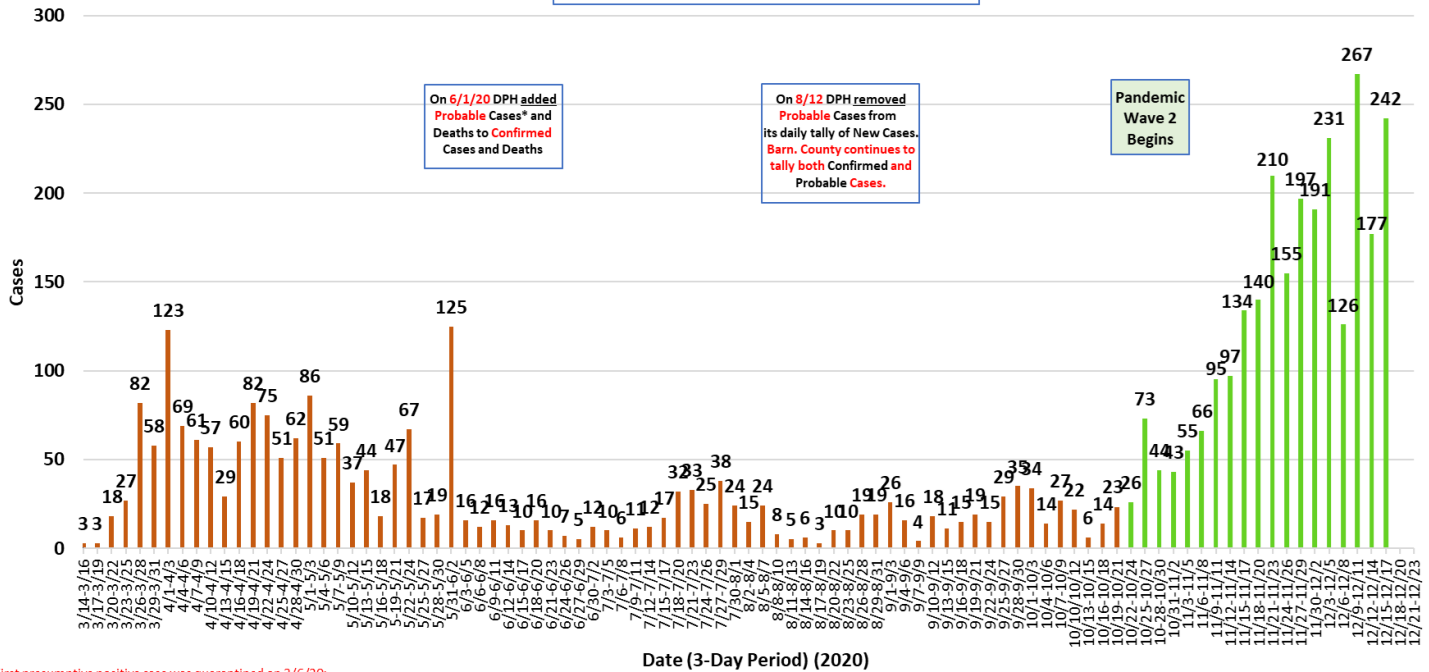


COVID-19 Epidemiological Curve--New Cases (Confirmed + Probable)

Barnstable County, as of 12/17/20 5:00 pm

(New Cases per 3-Day Period)

4,771 Cases (4,240 Conf + 531 Prob); 212 Deaths



First presumptive positive case was quarantined on 3/6/20;

Incubation Period = 14 Days; Data presented in 3-day periods which equal ~1/4 of the Incubation Period; * Estimate based on Barn. County percentage of state population (3.13%)

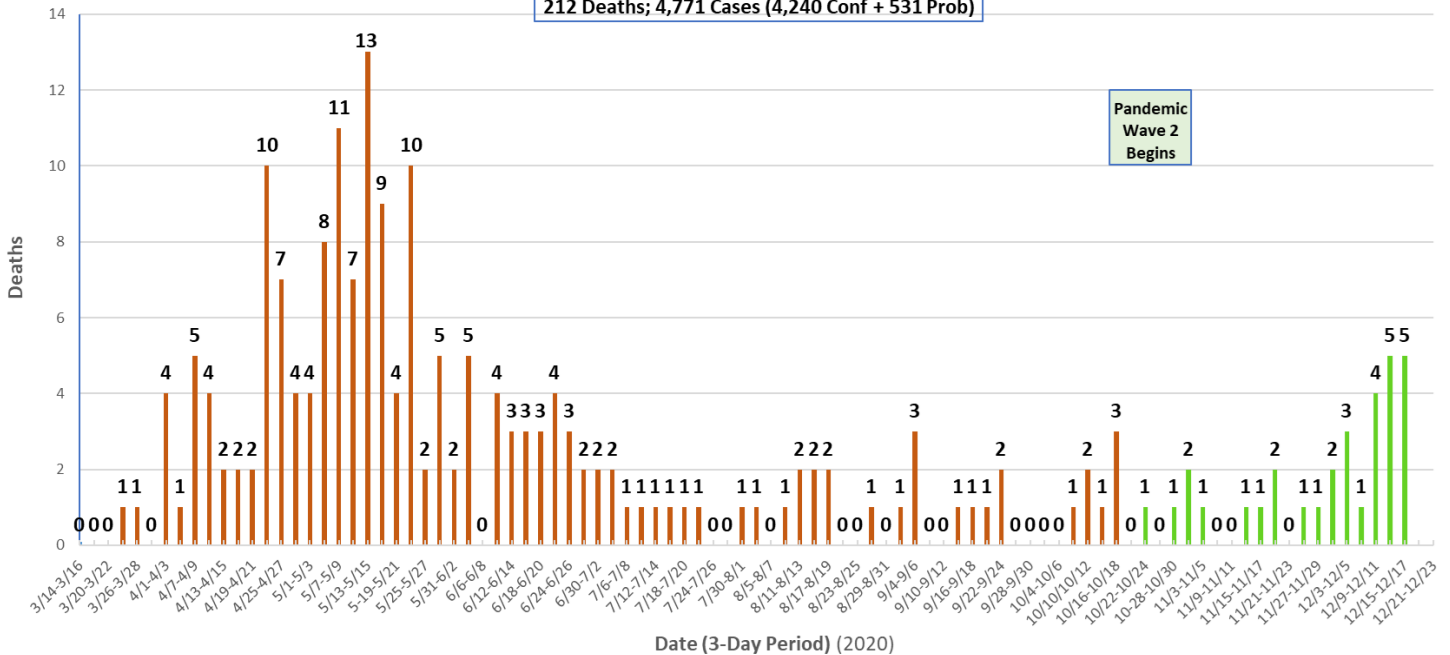
Source: V. Harik, BCDHS

COVID-19 Epidemiological Curve--New Deaths (Confirmed + Probable)

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212 Deaths; 4,771 Cases (4,240 Conf + 531 Prob)

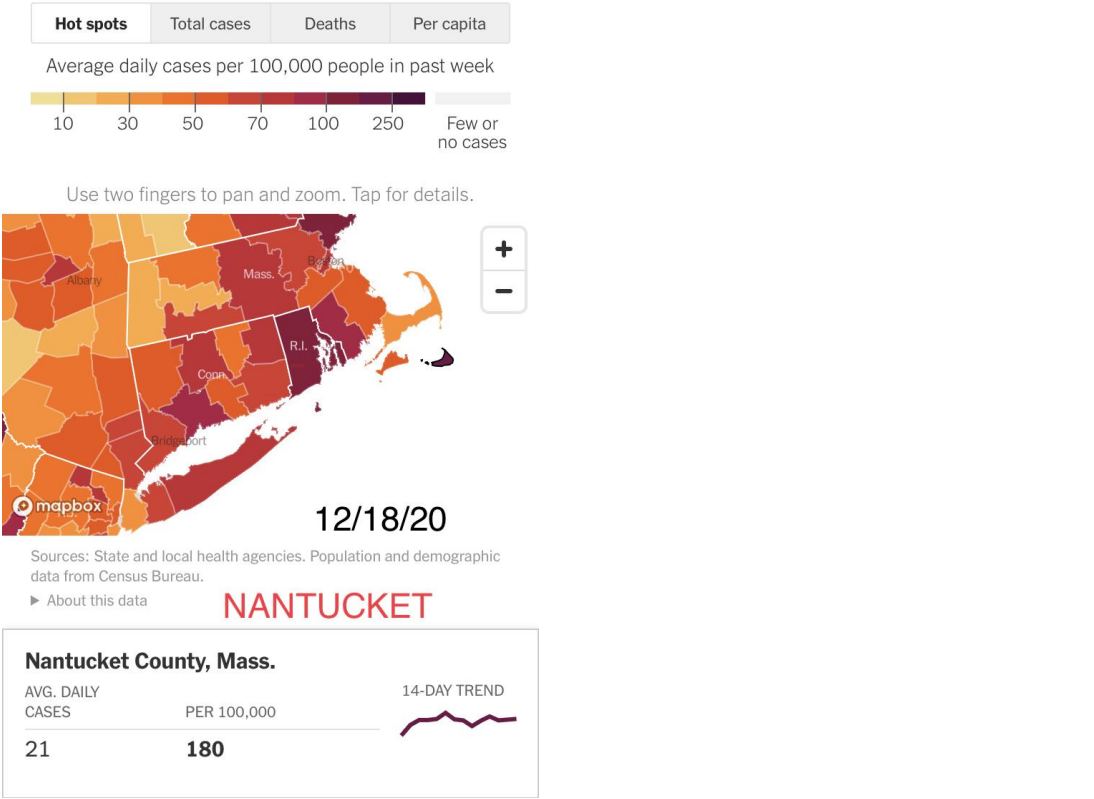
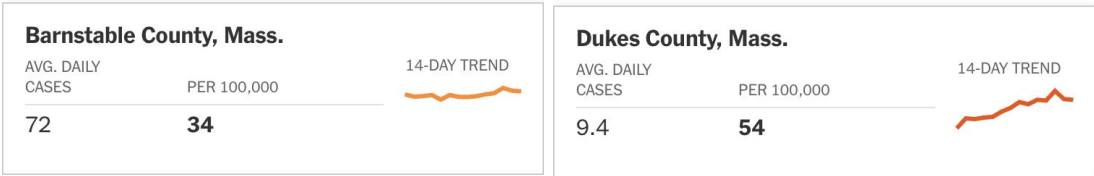
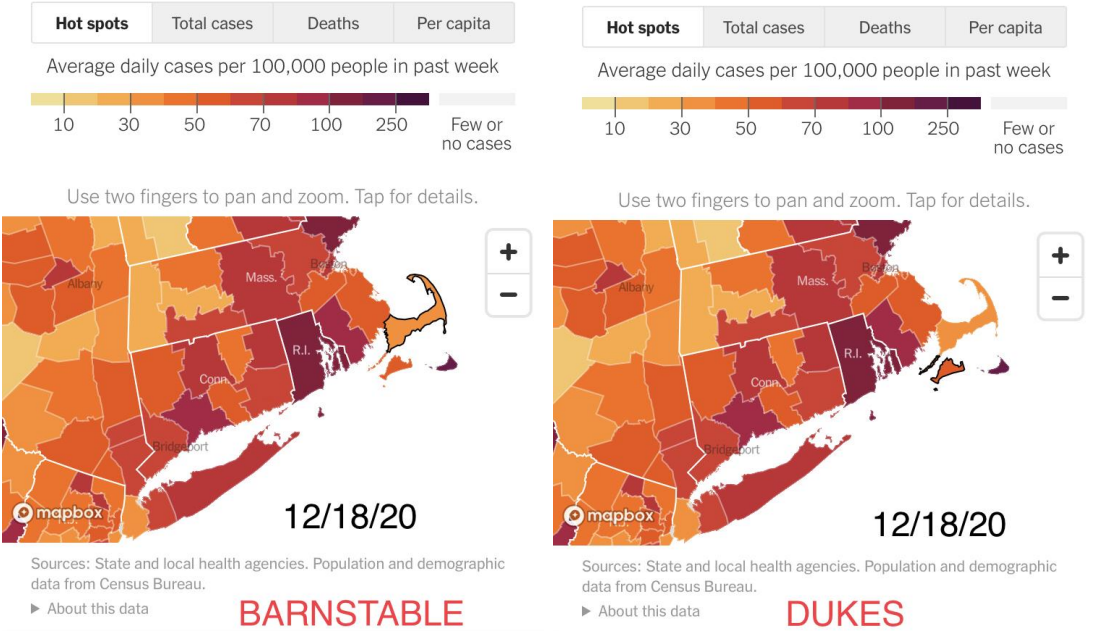


First presumptive positive case was quarantined on 3/6/20;

Incubation Period = 14 Days; Data presented in 3-day periods which equal ~1/4 of the Incubation Period

Source: V. Harik, BCDHS; Using data provided by the MA Department of Public Health

SOURCE: New York Times (nytimes.com)



Barnstable County COVID-Related Hospital & ICU Beds Occupied, with Cases & Deaths

Source: V. Harik, Barn. County Dept of Human Services; Tabulation of MA DPH Data

WEEKLY: (On Tuesdays)

		Not Cumulative		Cumulative		
Date Reported by DPH	Hospital	Hospital Beds Occupied	ICU Beds Occupied	Barnstable County Cases (Confirmed)	Barnstable County Deaths	3-day Avg. of Persons in Hosp. (Ward + ICU)
11/12/2020	Cape Cod Hospital	1	0			
	Falmouth Hospital	0	0			
		1	0	2,266	187	1.0
11/17/2020	Cape Cod Hospital	8	1			
	Falmouth Hospital	3	0			
		11	1	2,835	188	9.3
11/24/2020	Cape Cod Hospital	11	0			
	Falmouth Hospital	4	0			
		15	0	3,261	190	15.7
12/1/2020	Cape Cod Hospital	14	3			
	Falmouth Hospital	7	1			
		21	4	3,129	192	25.7
12/8/2020	Cape Cod Hospital	14	5			
	Falmouth Hospital	7	2			
		21	7	3,554	198	19.3
12/15/2020	Cape Cod Hospital	19	5			
	Falmouth Hospital	7	1			
		26	6	4,086	210	27.3
MOST RECENTLY REPORTED:						
12/17/2020	Cape Cod Hospital	22	5			
	Falmouth Hospital	11	2			
		33	7	4,240	212	28.0

MA DPH Data Dashboard, WEEKLY REPORT of 12/17/20 (for the Period 11/29/20 to 12/12/20)

City/Town	(March 2020 to Present) Total Case Count	Case Count Last 14 Days	Average Daily Incidence Rate per 100K	Relative Change in Case Count	Total Tests	Total Tests Last 14 Days	Positive Tests Last 14 Days	Percent Positivity Last 14 Days	Change in Percent Positivity
Barnstable	1,377	258	41.2	Lower	33,984	4,854	284	5.85%	Lower
Bourne	426	91	30.9	Higher	18,798	2,321	97	4.18%	No Change
Brewster	172	26	18.7	Higher	7,698	1,154	29	2.51%	Higher
Chatham	66	13	15.9	Higher	4,362	622	13	2.09%	Higher
Dennis	216	45	24.6	Lower	8,651	1,100	47	4.27%	Lower
Eastham	44	11	17.1	Higher	2,582	275	13	4.73%	Higher
Falmouth	563	125	28.6	Higher	31,572	4,367	161	3.69%	Higher
Harwich	265	47	26.7	Higher	8,992	1,128	55	4.88%	Lower
Mashpee	222	63	29.0	Higher	12,173	1,657	69	4.16%	Higher
Orleans	41	9	11.4	Lower	3,266	384	9	2.34%	Lower
Provincetown	36	4	11.1	Higher	2,818	297	5	1.68%	Higher
Sandwich	251	62	21.0	Higher	14,118	1,686	63	3.74%	Higher
Truro	18	3	10.9	Higher	1,228	116	3	2.59%	Higher
Wellfleet	25	8	20.7	Higher	1,747	154	9	5.84%	Higher
Yarmouth	457	128	38.0	Higher	17,618	2,588	143	5.53%	Higher
Barnstable County	4,179	893	29.4	Higher	169,607	22,703	1,000	4.40%	Higher
Aquinnah	3	0	0	No Change	381	23	0	0%	No Change
Chilmark	6	1	9	Higher	2,398	146	1	1%	Higher
Edgartown	121	31	54.2	Higher	7,173	664	36	5.42%	Higher
Gosnold	5	0	0	No Change	111	0	0	0%	No Change
Oak Bluffs	91	35	48.0	Higher	4,685	491	37	7.54%	Higher
Tisbury	130	26	44.5	Higher	9,038	864	29	3.36%	Higher
West Tisbury	47	14	34.8	Higher	3,185	266	15	5.64%	Higher
Dukes County	408	108	*	Lower	26,971	2,454	118	4.81%	Lower
Nantucket County	622	294	184.0	Higher	13,821	2,502	302	12.07%	Higher
State	292,316	63,445	65.1	Higher	9,809,105	1,202,244	72,236	6.01%	Higher

Data Source: MA DPH, 12/17/20 Weekly COVID Report (<https://www.mass.gov/info-details/covid-19-response-reporting>); Analysis: V. Harik BCDHS.

Massachusetts COVID Testing Rates, As Applied to Barnstable County (Thru 12/12/20)

Sources: Census.gov; MA DPH Weekly COVID Report, 12/17/20. Analysis: V. Harik, BCDHS

	MA	Barnstable County
Population Estimate (@ July 1, 2019)	6,892,503	212,990
Barnstable County % of MA Pop.		3.09%
Barn. County % of Total MA Tests		1.73%
Barn. County % of MA Tests, Past Two Weeks		1.89%
Barn. County % of MA <u>Total</u> Confirmed Cases		1.43%
Barn. County % of MA Confirmed Cases, <u>Past Two Weeks</u>		1.41%
MA % Positive Tests Last 14 Days		6.01%
Barnstable County % Positive Tests Last 14 Days		4.40%

Active COVID Clusters by Exposure Setting Type, as of 12/17/20

Source: <https://www.mass.gov/info-details/covid-19-response-reporting>. Tabulation: V. Harik, Barnstable County DHS

Sorted by Number of Cases in New Cluster Settings

		New Clusters			Ongoing Clusters			Total	
		(Identified 11/15/20 – 12/12/20)			(Cluster Identified Prior to 11/15 But Not Meeting Criteria for Closing)				
	Exposure Setting	Clusters	Confirmed Cases	Close Contacts	Clusters	Confirmed Cases	Close Contacts	Clusters	Confirmed Cases
1	Household	15,740	40,339	---	6,747	3,700	---	22,487	44,039
2	Long Term Care Facilities	142	1,378	---	171	1,776	---	313	3,154
3	Child Care	130	364	504	120	81	215	250	445
4	Social Gatherings	46	262	71	49	16	22	95	278
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9	K-12 Schools	31	151	130	51	23	123	82	174
10	Other Workplaces	19	86	59	24	52	7	43	138
11	Other Healthcare	16	74	64	23	19	10	39	93
12	Industrial Settings	16	65	25	65	162	56	81	227
13	Colleges & Universities	7	63	12	33	7	27	40	70
14	Retail & Services	13	37	10	21	15	16	34	52
15	Organized Athletics/Camps	5	26	91	25	15	108	30	41
16	Other Food Establishments	5	26	6	8	8	1	13	34
17	Recreation/Cultural	4	23	.	4	.	.	8	23
18	Places of Worship	1	6	.	15	12	11	16	18
19	Offices	2	5	.	14	1	2	16	6
20	Other	1	5	.	8	5	30	9	10
21	Corrections	1	2	.	15	860	128	16	862
22	Shelters	.	.	.	5	3	11	5	3
23	Travel & Lodging	.	.	.	3	.	.	3	.
	TOTAL	16,305	43,751	1,246	7,583	7,180	969	23,888	50,931

New Clusters: Clusters with the first case (indicated by the first positive lab result) identified during the four week period 11/8 – 12/5/2020.

Ongoing Clusters: Clusters with the first case identified prior to 11/15 that has not met criteria to be closed. Confirmed cases included in ongoing clusters occurred between 11/15 and 12/12 but are associated with a cluster that began prior to 11/15. Close contacts included in ongoing clusters occurred between 11/15 and 12/12 but are associated with a cluster that began prior to 11/15.

Closed Clusters: A cluster is closed after 28 days have passed since the last confirmed case; 19,676 clusters are closed, 102,201 cases are associated with closed clusters

Source of Data: Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences. Long Term Care Facility Data from the National Healthcare Safety Network beginning 5/31/2020. All other data from MAVEN and are subject to change. Only clusters consisting of two or more confirmed Massachusetts cases with a common exposure have been included.

MA DPH Data Dashboard, WEEKLY REPORT of 12/17/20 (for the Period 11/29/20 to 12/12/20)

Data Source: MA DPH, 12/10/20 Weekly COVID Report (<https://www.mass.gov/info-details/covid-19-response-reporting>)

County	Total Case Count	Case Count (Last 14 Days)	Average Daily Incidence Rate per 100,000 (Last 14 days)	Relative Change in Case Counts ¹	Total Tests	Total Tests (Last 14 days)	Total Positive Tests (Last 14 days)	Percent Positivity (Last 14 days)	Change in Percent Positivity ²
Barnstable County	4,179	893	29.4	Higher	169,607	22,703	1,000	4.40%	No Change
Berkshire County	2,330	585	33.1	Lower	163,902	17,139	668	3.90%	Lower
Bristol County	27,549	6,498	81.2	Higher	587,763	73,986	7,402	10.00%	Higher
Dukes and Nantucket Counties	1,025	401	99.4	Higher	40,792	4,956	420	8.47%	Higher
Essex County	47,846	11,323	101.5	Higher	999,581	139,465	13,614	9.76%	Higher
Franklin County	1,030	351	35.2	Higher	85,541	7,901	380	4.81%	Higher
Hampden County	21,402	4,483	68	Higher	484,923	61,801	5,285	8.55%	Higher
Hampshire County	3,038	641	27.9	Higher	332,172	22,816	706	3.09%	Higher
Middlesex County	61,641	13,407	58.9	Higher	2,489,721	319,519	15,088	4.72%	Higher
Norfolk County	21,684	4,738	47.3	Higher	854,368	107,062	5,233	4.89%	Higher
Plymouth County	19,430	4,008	54.3	Higher	467,763	61,518	4,429	7.20%	Higher
Suffolk County	46,365	8,076	71.3	Higher	1,918,588	226,193	9,153	4.05%	Higher
Worcester County	33,973	7,842	66.8	Higher	1,035,067	119,098	8,658	7.27%	Higher
Unknown ³	824	199	*	*	179,317	18,087	200	*	*
State	292,316	63,445	65.1	Higher	9,809,105	1,202,244	72,236	6.01%	Higher

Data are current as of 11:59pm on 12/15/2020;

¹ Number of new cases occurring over the current two-week period (11/29/2020 – 12/12/2020) compared to the previous two-week period (11/22/2020 – 12/5/2020). **Higher**=number of new cases in the current two-week period higher than the number of new cases during the last two-week period. **Lower**=number of new cases in the current two-week period lower than number of new cases during the last two-week period. **No change**=number of new cases in current two-week period is equal to the number of new cases during the last two-week period.

² Change in percent positivity compared to the previous week's (12/10/2020) report. **No Change**=<0.10% difference in the percent positivity.

³ Address information for these cases is currently being obtained. DPH calculates rates per 100,000 population using denominators estimated by the University of Massachusetts Donahue Institute using a modified Hamilton-Perry model (Strate S, et al. Small Area Population Estimates for 2011 through 2020, report, Oct 2016.).

Please note: Data for these tables are based on information available in the DPH surveillance database at a single point in time. Case counts for specific cities and towns change throughout the day as data cleaning occurs (removal of duplicate reports within the system) and new demographic information (assigning cases to their city or town of residence) is obtained.

Vaira Harik, M.S.

Deputy Director

Barnstable County Dept. of Human Services

Email: vharik@barnstablecounty.org